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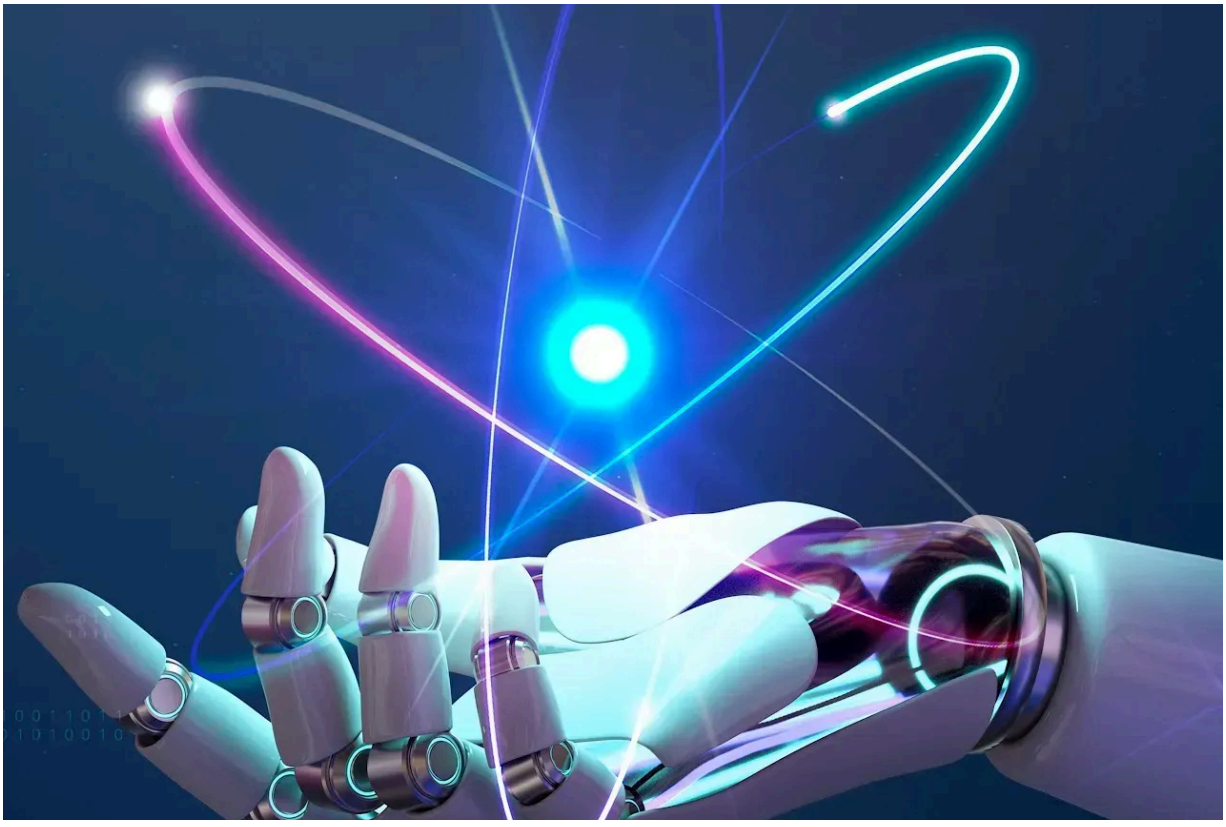
JENKS SCIENCE AND TECH TALKS

Jenks forum discusses a mystery and aviation hydrogen

SPECIAL TO THE NEWS

March 4, 2025 . 10:26 AM — 3 min read



In January MIT's Professor Srinivasan Chandrasekar spoke about the forerunner of modern toughened glasses, *and Dr. Albert Moussa a*
hydrogen in aviation at the David Wilson Science and Technology For

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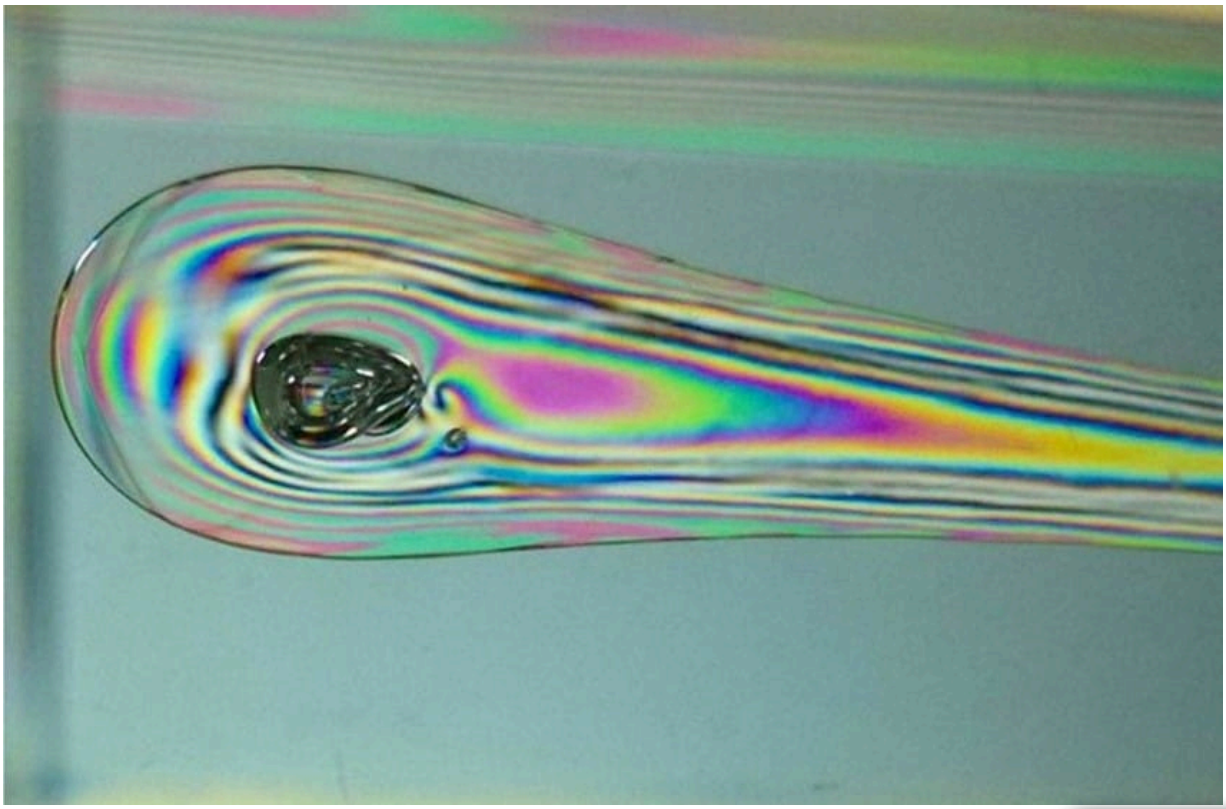
By Ron Latanision, John Brown, and Walter Hubbard

Prince Rupert's Drops: 400-year-old Mystery Revealed

On February 14, Professor Srinivasan Chandrasekar of Purdue University spoke about Prince Rupert's Drops. Prince Rupert's drops, special "glass bubbles," possessing very striking mechanical properties, have been in existence since before 1625. Forerunners of modern toughened glasses, they exhibit a paradoxical combination of strength and fragility that excited the imagination of natural philosophers of yore. The head of a drop does not break when hammered on an anvil: yet when its tail is broken with mild finger pressure applied, the drop disintegrates explosively into fine powder. Chandrasekar unraveled this curious behavior using high speed photography, fractography and stress measurements, thereby providing the solution to a 400-year-old conundrum. The following link is to a YouTube video that has had over 65 million views!



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Srinivasan Chandrasekar is Professor in the Schools of Industrial Engineering and Materials Engineering at Purdue University. His research and teaching interests are in manufacturing, materials processing, fracture and tribology. His recent contributions all stem from the use of high-speed imaging techniques to characterize material flow and fracture phenomena at high spatial and temporal resolution. “Prince Rupert’s Drops” exemplifies this approach.

Hydrogen in Aviation – Potentials and Challenges

On February 28, Dr. Albert Moussa spoke about *Hydrogen in Aviation – Potentials and Challenges.* Decarbonization and advances in Urban Air Mobility are driving the introduction of new fuels, technologies, and requirements in aviation. He described the aviation segments where hydrogen can satisfy these requirements and its associated challenges. To obtain FAA certification, manufacturers must demonstrate that the risk to passengers and the public from new fuel is no worse than that from traditional fuels. Dr. Moussa discussed some of the safety issues with hydrogen, and drawing upon his 1982 study for NASA, compared quantitatively the crash fire hazards of aircraft fueled by liquid hydrogen vs. carbon fuels. He also commented on hydrogen use in ground transport.

Dr. Moussa is the founder and president of BlazeTech Corp., an R&D and engineering consulting firm that services the aviation and energy industries. Previously, he spent a decade as senior consultant at Arthur D. Little, Inc. For about four decades, he worked in innovations in the areas of energy, environment and safety. For example, he developed unique software on fire, explosion and toxic releases for the chemical, aerospace and defense industries. He developed also novel pulverized and fluidized bed coal combustors. His forte has been in technology development to proof-of-concept testing but now he is seeking also the commer
of his innovations. He has received several awards including the William

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Lockwood Memorial Lecture Award; Engineer of the Year by the New England AIAA Section; AIAA Distinguished Lecturer; Best Papers by SAE and ASEI; and several ASME citations. He has served on three national committees and was Associate Editor of the Journal of Energy Resources Technology. He received his Bachelor's from Stanford University and his PhD from MIT.

UPCOMING WILSON FORUM PRESENTATIONS:

On March 14, Dahlia Saba, the granddaughter of Lita and Don Nelsen and a graduate student at the University of Wisconsin, will speak about her experiences from the Perspectives of a first-year PhD student.

And on March 28, Courtney Marshall, a teacher in the Fairfax (Virginia) County Public Schools, will speak about "AI in K-12 Education." One of the goals of our Forum is to reach out to teachers and pre-college students.

All Wilson Science & Technology Forum presentations are recorded and can be streamed free on demand at the Wilson Forum's website.

WinCAM broadcasts recordings of Forum presentations at 3 pm on Mondays and Fridays. For the schedule, go to https://wincam.org/schedule/education/ and search for "Wilson."

The Wilson Forum's meetings are via Zoom, at 10:30 am on the second and fourth Fridays of each month, with the exception of July and August.

To learn of upcoming Forum speakers, you can check the Jenks C website https://www.jenkscenter.org/ (events > daytime > Wilson Forum).

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Better yet, you can receive advance notification of upcoming talks by emailing a request to be added to the Forum's roster to rlatanision@alum.mit.edu.

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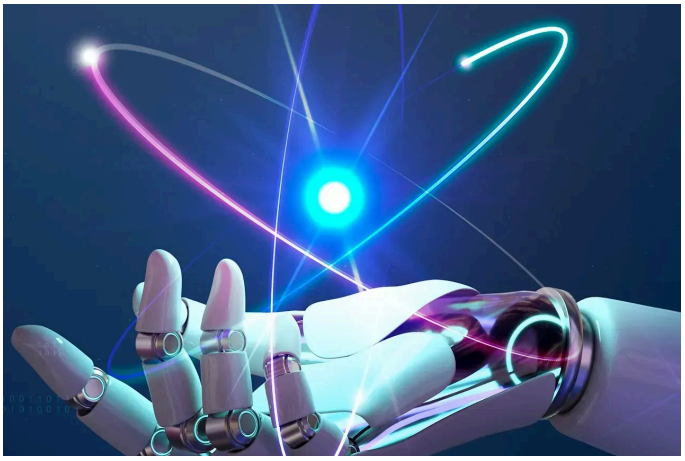
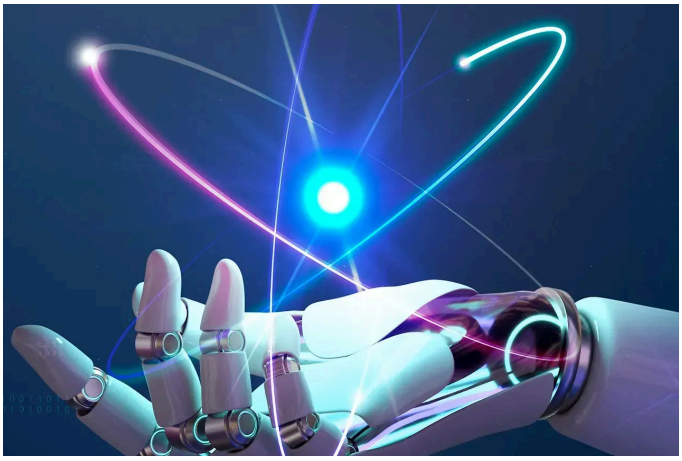


JENKS SCIENCE AND TECH TALKS

Jenks Science and Tech Talks - on truth and the purposes of government

By Ron Latanision and John Brown On November 14, author Joe Simonetta spoke about the truth, which is under siege in our contemporary world; and on November 28th Wilson Forum Historian Vincent Dixon spoke about a central debate of our time, the purposes and evolution of government. By Ron Latanision

SPECIAL TO THE NEWS
December 11, 2025



JENKS SCIENCE AND TECH TALKS

Jenks Science & Tech Talks discusses AI and spent nuclear waste

The Wilson Science & Technology Forum at The Jenks Center in Winchester By Ron Latanision and John Brown Tales from the AI Frontier On October 10, Dr. Eddie Robins spoke about the human-machine interface in the expanding presence of artificial intelligence (AI) in our lives. The rapidity with which AI

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November 15, 2025

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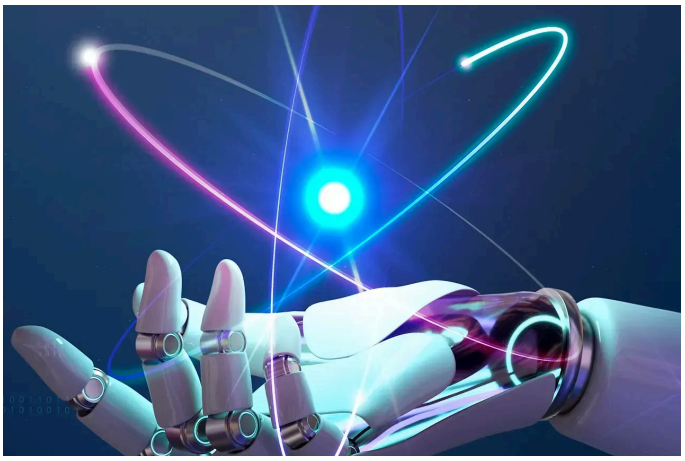

JENKS SCIENCE AND TECH TALKS

Jenks Science and Technology Forum discusses managing risks in emerging tech, plus quantum computers

By Ron Latanisian In September, Michael Garjian spoke about An Alternative to Corporate Capitalism in Managing the Socio-economic Risks of Emerging Technologies and Jagadeesh Moodera spoke about The Evolution of Quantum Computers An Alternative to Corporate Capitalism The introduction of any new technology into the marketplace and into our social

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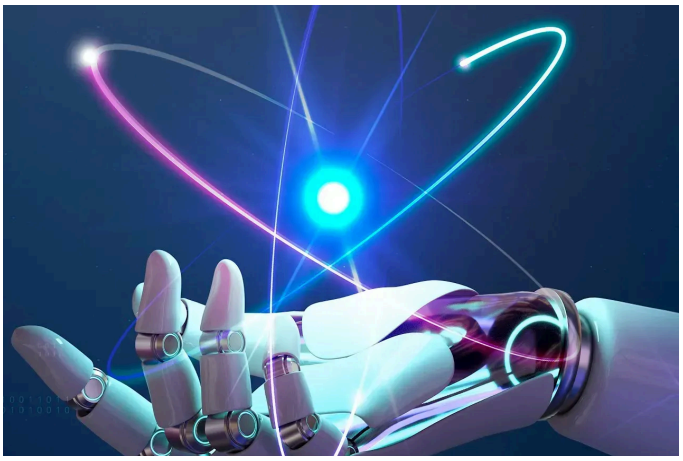
October 5, 2025



JENKS SCIENCE AND TECH TALKS

Science and Technology at the Jenks - AI talk and Superconductors

By Ron Latanision, John Brown, and Walter Hubbard In June, Marv Goldschmitt added the perspective of a technological philosopher to The Artificial Intelligence Revolution and Professor Amit Goyal spoke about High Temperature Superconductors Artificial Intelligence - Wrap Up for the 2024-2025 Forum Season On June 27, our season wrap-up, The

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July 23, 2025

Latest

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MIND & MATTER

EVENTS

Celebrate Women's History Month with Girls Leading Change

The following was submitted by the Network for Social Justice: To mark Women's History Month and International Women's Day in 2026, the Network for Social Justice is collaborating with club leaders from Winchester High School and members of the Community Health team from La Colaborativa in Chelsea and

March 4, 2026

NEWS

Winchester School Committee candidates bring contrasting backgrounds to Thursday forum

Two candidates for Winchester's School Committee will face voters at a forum as the district navigates a new literacy curriculum, budget pressures and questions about student mental health. Heather von Mering and John Bellaire are competing for an open seat on the School Committee, which oversees a budget von

WILL DOWD | STAFF WRITER

March 4, 2026

FEATURES

'Chicago: Teen Edition' dances onto the Winchester High School stage

By Talia Ho | Correspondent Fame. Fortune. And all that jazz. This spring, Winchester High School presents "Chicago: Teen Edition," a bold musical that explores celebrity culture, media manipulation, and the cost of ambition. Set in the 1920s, this iconic production is sure to leave the audience wanting more. Performances will

SPECIAL TO THE NEWS

March 4, 2026

EVENTS

Ripley Chapel in Winchester presents 'Syldason: You Are Welcome Here'

The following was submitted by the Ripley Chapel at First Congregational Church: On Friday, March 13, beginning at 7:30 p.m., live in-person and live streamed from the stunning Ripley Chapel at First Congregational Church, Winchester, 21 Church St., join in with Syldason, a duo concert featuring Sylvie Zakarian,

March 4, 2026

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